UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
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ART UNIT	PAPER NUMBER
2619	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/631,947	CHEN ET AL.
	Examiner	**Art Unit**	
	Brian T. O'Connor	2619	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 July 2007*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,6,7,9,12,13,15,18 and 20* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,6,7,9,12,13,15,18 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/1/2007*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   This office action is in response to Applicant's amendment filed on 07/31/2007.

2.   Claims 2, 4, 5, 8, 10, 11, 14, 16, 17, 19, 21, and 22 have been cancelled. Claims 1,

3, 6, 7, 9, 13, 15, 18, and 20 have been amended. Claims 1, 3, 6, 7, 9, 12, 13, 15, 18, and

20 are currently pending.

Claim Rejections - 35 USC § 103

3.   The text of those sections of Title 35, U.S. Code not included in this action can be

found in a prior Office action.

4.   Claims 1, 3, 6, 7, 9, 12, 13, 15, 18, and 20 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Wildfeuer et al. (US 6,829,244; hereafter Wildfeuer) in view of

McNeill et al. (US 7,161,962; hereafter McNeill) and further in view of Schulzrinne et al.

("RTP Payload for DTMF Digits, Telephone Tones and Telephone Signals", RFC 2833, IETF,

May 2000; hereafter RFC-2833).

With respect to claims 1 and 7, Wildfeuer discloses a communication technique

using a first gateway (106a of Figure 1), a first modem (102a of Figure 1), a telephone line

between the first gateway and the first modem (104a, 108 of Figure 1), a second gateway

(106b of Figure 1), a second modem (102b of Figure 1), a telephone line between the

second gateway and the second modem (104b, 108 of Figure 1) and a packet network for

communication between the first gateway and the second gateway (110 of Figure 1).

Wildfeuer's technique begins with the first modem receiving a call setup request from the

second modem (column 5, lines 30-37), and then the first modem sends an answer back

tone to the second modem (column 5, lines 36-40). The call setup request and the answer

back tone are received, detected, and processed by the first gateway modules (112a, 114a,

116a, 120a of Figure 1) that convert PCM signals into frames for packet transmission and

convert packets of frame data into PCM signals. The first gateway also uses a TDET module

(212 of Figure 2) to detect the answer back tone sent by the first modem (column 5, lines

16-17).

However, Wildfeuer fails to disclose a module for detecting a phase reversal in the

answer back tone. Wildfeuer also fails to disclose detecting an answer tone then detecting

an answer tone with a phase reversal.

McNeill, in an invention of telephone signal detection, discloses a detection circuit

and method (22 of Figure 3; 82, 84, 88, 86 of Figure 4) that continuously detects an answer

tone (column 6, lines 28-33; column 6, lines 54-61) and then declares that a phase reversal

is present in the answer tone (column 7, lines 39-44).

McNeill realizes the advantage of more effective modem compression by using a tone

detector circuit and method with improved performance in compressed signals (column 1,

lines 40-52). Thus, it would have been obvious to one of ordinary skill in the art at the time

of the invention to use the detector and technique of McNeill with the communications

network and method of Wildfeuer.

Wildfeuer also fails to disclose the first gateway sending a message indicates the

detection of a phase reversal in the answer tone to the second gateway over the packet

network, a packet message that indicates an answer tone with phase reversal, and sending

a packet message that indicates an answer tone.

RFC-2833 discloses an Internet telephone gateway for transmitting a message

packet (RTP payload) instead of an audio packet (PCM encoded data frames) when a DTMF

or telephone signal needs to be transmitted (Section 1 Introduction, second paragraph, pg

1). RFC-2833 teaches support for the modem tones ANS, /ANS, ANSam, and /ANSam

(Section 3.11 Data Modem and Fax Events, pg 11-12; Table 3, pg 14). RFC-2833 further

discloses an encoding symbol for an answer tone with phase reversal (Section 3.11 Data

Modem and Fax Events, pg 11; Table 3, pg 14; see **/ANS**). RFC-2833 further discloses

encoding symbols for an answer tone and an answer tone with phase reversal (Section 3.11

Data Modem and Fax Events, pg 11-12; Table 3, pg 14; see **ANS** and **/ANS**). RFC-2833

explains that ANS is for disabling echo suppression and /ANS is for disabling echo

suppression and echo cancellation.

RFC-2833 realizes the advantage of greater accuracy in sending tone signals over

packet networks by using messaging instead of low-rate encoders that have difficulty in

reproducing accurate tone signals (Introduction section, first paragraph, pg 1). Thus, it

would have been obvious to one of ordinary skill in the art at the time of the invention to

use the technique of RFC-2833 with the communication network and method of Wildfeuer.

With respect to claims 13 and 18, Wildfeuer discloses a communication technique

using a first gateway (106a of Figure 1), a first modem (102a of Figure 1), a telephone line

between the first gateway and the first modem (104a, 108 of Figure 1), a second gateway

(106b of Figure 1), a second modem (102b of Figure 1), a telephone line between the

second gateway and the second modem (104b, 108 of Figure 1) and a packet network for

communication between the first gateway and the second gateway (110 of Figure 1).

Wildfeuer's technique includes the first gateway receiving a call signal from the first modem

directed to the second modem (column 5, lines 30-37), and then transmitting a call request

generated by the call signal from the first modem over the packet network (column 5, lines

36-40). Next, the first gateway will receive and process a answer back tone generated by

the second modem and transmitted by the second gateway. The call setup request and the

answer back tone are received, detected, and processed by the first gateway modules

(112a, 114a, 116a, 120a of Figure 1) that convert PCM signals into frames for packet

transmission and convert packets of frame data into PCM signals. Wildfeuer also discloses

that an echo cancellation (208 of Figure 2) is disabled when an answer back tone is

detected (column 5, lines 17-21).

However, Wildfeuer fails to disclose a message that contains a phase reversal in the

answer back tone. Wildfeuer also fails to disclose detecting an answer tone then detecting

an answer tone with a phase reversal.

McNeill, in an invention of telephone signal detection, discloses a detection circuit

and method (22 of Figure 3; 82, 84, 88, 86 of Figure 4) that continuously detects an answer

tone (column 6, lines 28-33; column 6, lines 54-61) and then declares that a phase reversal

is present in the answer tone (column 7, lines 39-44).

McNeill realizes the advantage of more effective modem compression by using a tone

detector circuit and method with improved performance in compressed signals (column 1,

lines 40-52). Thus, it would have been obvious to one of ordinary skill in the art at the time

of the invention to use the detector and technique of McNeill with the communications

network and method of Wildfeuer.

Wildfeuer also fails to disclose the first gateway sending a message indicates the

detection of a phase reversal in the answer tone to the second gateway over the packet

network, a packet message that indicates an answer tone with phase reversal, and receiving

a packet message that indicates an answer tone.

RFC-2833 discloses an Internet telephone gateway for transmitting a message

packet (RTP payload) instead of an audio packet (PCM encoded data frames) when a DTMF

or telephone signal needs to be transmitted (Section 1 Introduction, second paragraph, pg

1). RFC-2833 teaches support for the modem tones ANS, /ANS, ANSam, and /ANSam

(Section 3.11 Data Modem and Fax Events, pg 11-12; Table 3, pg 14). RFC-2833 further

discloses an encoding symbol for an answer tone with phase reversal (Section 3.11 Data

Modem and Fax Events, pg 11; Table 3, pg 14; see **/ANS**). RFC-2833 further discloses

encoding symbols for an answer tone and an answer tone with phase reversal (Section 3.11 Data Modem and Fax Events, pg 11-12; Table 3, pg 14; see **ANS** and **/ANS**). RFC-2833 explains that ANS is for disabling echo suppression and /ANS is for disabling echo suppression and echo cancellation. RFC-2833 further discloses an encoding symbol for an answer tone with phase reversal (Section 3.11 Data Modem and Fax Events, pg 11-12; Table 3, pg 14; see **/ANS**).

RFC-2833 realizes the advantage of greater accuracy in sending tone signals over packet networks by using messaging instead of low-rate encoders that have difficulty in reproducing accurate tone signals (Introduction section, first paragraph, pg 1). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the technique of RFC-2833 with the communication network and method of Wildfeuer.

With respect to claims 3, 9, 15, and 20, Wildfeuer does not disclose a packet message that indicates an amplitude-modulated answer tone with phase reversal.

RFC-2833 discloses an encoding symbol for an amplitude-modulated answer tone with phase reversal (Section 3.11 Data Modem and Fax Events, pg 11-12; Table 3, pg 14; see **/ANSam**).

RFC-2833 realizes the advantage of greater accuracy in sending tone signals over packet networks by using messaging instead of low-rate encoders that have difficulty in reproducing accurate tone signals (Introduction section, first paragraph, pg 1). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the technique of RFC-2833 with the communication network and method of Wildfeuer.

With respect to claims 6 and 12, Wildfeuer further discloses that the second gateway also has an echo canceller (208 of Figure 2) that is disabled when an answer back tone is detected (column 5, lines 17-21).

Wildfeuer does not disclose receiving a packet message that indicates an answer

tone with a phase reversal from the first gateway.

RFC-2833 discloses an encoding symbol for an answer tone with phase reversal

(Section 3.11 Data Modem and Fax Events, pg 11-12; Table 3, pg 14; see **/ANS**).

RFC-2833 realizes the advantage of greater accuracy in sending tone signals over

packet networks by using messaging instead of low-rate encoders that have difficulty in

reproducing accurate tone signals (Introduction section, first paragraph, pg 1). Thus, it

would have been obvious to one of ordinary skill in the art at the time of the invention to

use the technique of RFC-2833 with the communication network and method of Wildfeuer.

Response to Arguments

5.   Applicant's arguments with respect to claims 1, 7, 13, and 18 have been considered

but are moot in view of the new ground(s) of rejection.

Conclusion

6.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until

after the end of the THREE-MONTH shortened statutory period, then the shortened statutory

period will expire on the date the advisory action is mailed, and any extension fee pursuant

to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no

event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian T. O'Connor whose telephone number is 571-270-1081. The examiner can normally be reached on 9:00AM-6:30PM, M-F, 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BTO

Brian T. O'Connor
October 10, 2007
Patent Examiner

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